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FOREIGN CROPS and MARKETS

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COMMODITY EXCHANGE ADM'N
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LATE CABLES

Completion of credit arrangements just announced for the purchase by Spain of about 14 million bushels of Argentine wheat and 3,300 short tons of frozen meat. Wheat price reported agreed upon was about 52 cents per bushel f.o.b. Buenos Aires.

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Little winter killing of grain reported in Hungary, but crops late as a result of frequent rains, and spring seedings delayed.

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Livestock numbers in Ireland in January 1941 estimated as follows with comparable figures for 1940 in parentheses: Cattle, 3,625,000 (3,569,000); sheep, 2,195,000 (2,256,000); hogs, 853,000 (899,000), of which sows, 88,000 (103,000).

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GRAINS

INDIA ESTIMATES 1941 WHEAT CROP BELOW THAT OF LAST YEAR . . .

The first official estimate of the 1941 wheat crop of India was placed at 382,032,000 bushels, according to information received in the Office of Foreign Agricultural Relations. This compares with the revised first estimate of production in 1940 of 391,589,000 bushels and the final figure of 402,603,000 bushels. The third estimate of the area sown to wheat, 34,108,000 acres, shows an increase of 643,000 acres over the revised third estimate for 1940 and is slightly larger than the final figure of 34,003,000 acres. Acreage estimates issued so far this season have indicated the largest wheat area reported since 1935. Rainfall was light, however, in the fall and early winter. The result is that, although the condition of the crop is now reported to be good, prospects for a large outturn are not so bright as might have been expected from the large area reported.

During 1910-1914 and again in 1934-1938, India was the fourth largest wheat producer in the world, but the crop is grown by small farmers on holdings that rarely exceed 5 acres. It is marketed and largely consumed in the villages where grown. Years of plentiful harvests in India do not necessarily mean that a surplus will be available for export. When foreign demand is strong and world prices high, wheat may move from the country, but the volume depends largely upon the size and price of substitute food crops such as barley and gram. Even in years of good wheat harvests, importation may take place, since wheat from Australia can sometimes be brought in to supply areas near the southern ports more cheaply than domestic wheat can be transported from the northern part of the country, where the greater part of the wheat is produced.

The apparent domestic utilization of wheat in India during recent years has averaged about 360 million bushels. With crops exceeding this amount, especially in 1940 when the outturn was apparently somewhat larger than the previous record of 1938, above-average exports or carry-over stocks would be noted if conditions in India were the same as those in most surplus countries. Before the close of the April-March 1940-41 marketing year it was unofficially reported that little 1940 wheat would remain for commercial carry-over into the new season, so that it appears that increased domestic consumption has absorbed much if not most of the larger crop. The 1940 outturn was particularly large in the Punjab and Sind, which Provinces account for most of India's export wheat, but no trade data are available. Some demand did exist for Indian wheat to feed Empire troops in Africa, but to what extent this was met is unknown. The shortage of shipping space during the season made exportation difficult, and in February some quantities of wheat flour were reported waiting at ports for cargo space.

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INDIA: Wheat acreage, production, yield per acre, trade, and apparent domestic utilization, 1934-35 to 1940-41

Year of harvest	Acreage	Production	Average yield per acre	Imports a/	Exports a/	Apparent domestic utilization
	1,000 acres	1,000 bushels	Bushels	1,000 bushels	1,000 bushels	1,000 bushels
1934.......	36,077	349,813	9.7	286	1,014	349,085
1935.......	34,490	363,216	10.5	507	1,285	362,438
1936.......	33,639	352,203	10.5	60	9,858	342,405
1937.......	33,215	364,075	11.0	818	20,366	344,527
1938.......	35,640	401,856	11.3	5,946	13,551	394,251
Average..	34,612	366,233	10.6	1,523	9,215	358,541
1939.......	35,441	371,952	10.5	b/2,883	b/ 2,253	-
1940.......	34,003	402,603	11.8	-	-	-
1941.......	c/34,108	d/382,032	-	-	-	-

Compiled from official statistics. a/ Wheat, including flour as grain, for the marketing year April-March following harvest; figures do not include trade by land. b/ April-December. c/ Third estimate; revised third estimate for 1940 was 33,465,000 acres. d/ First estimate.

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ORIENTAL WHEAT SUPPLY SHORT BUT SHANGHAI FLOUR PLENTIFUL . . .

The shortage of wheat and flour in Japan and Manchuria became more pressing during the month ended April 15, according to information from the American consulate general at Shanghai, but Shanghai flour stocks were considered adequate for several months' consumption, unless reexports were heavy. Prospects for Japanese wheat production in 1941 were reported somewhat unfavorable, and a reduction in the Manchurian acreage appeared probable, but favorable conditions were said to prevail in Chosen. The rationing of flour was imminent in Japan, with exports to yen-bloc countries expected to be curtailed.

China

The domestic wheat market at Shanghai continued to be inactive during the month ended April 15. Native wheat was nominally quoted at $1.31 per bushel, with Japanese mills the only buyers. Flour prices, influenced by continuous arrivals of Australian and Canadian flour, declined slightly, but some recovery took place later on in sympathy with increasing rice prices. The only Chinese mill operating was using foreign wheat exclusively. The last transaction in Australian flour took place on March 31, and further purchases were reported to be hindered by lack of shipping space. About 25,000 barrels of Canadian flour, oriental grade, were purchased at the equivalent of $5.90 per barrel, including the dealer's profit. American export straight was quoted on March 25 at $6.50.

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Further bookings of Canadian flour were reported on April 4, when American export straight was $6.55 to $6.70 per barrel as against Canadian oriental grade at $6.00.

Local dealers at Shanghai estimated that the total supply on hand of flour, including wheat in terms of flour and bookings to be delivered as late as the middle of June, was about 1 million barrels. Since only 75,000 barrels were estimated to be required in Shanghai each month, flour appeared to be available for more than a year's consumption, provided reexports were not made in volume and restrictions were continued on inland shipments. With Tientsin stocks heavy and prices below Shanghai parity, large takings by North China were not expected by local dealers, especially since Shanghai stocks are largely in the hands of speculators. Additional purchases will depend on speculative buying and availability of shipping space. Under present conditions, the only active competition is between American and Canadian flour, but dealers felt assured that Australian flour would undersell both if transportation facilities improved.

Imports of wheat into China during February totaled 467,000 bushels as compared with 274,000 and 920,000 bushels, respectively, in the corresponding periods of 1940 and 1939. More than half a million barrels of flour entered during the month, several times the amount taken in February of 1940 and 1939. Wheat imports so far this season, July-February, have been less than half as large as in the comparable period of last season, but flour takings have shown a marked increase.

CHINA: Imports of wheat and flour, by countries of origin, February 1941, with comparisons

Country	February			July-February		
	1939	1940	1941	1938-39	1939-40	1940-41
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
Wheat						
United States..	635	a/	-	635	2,324	790
Canada.........	0	0	158	0	0	158
Australia......	285	274	309	285	2,834	1,194
Japan..........	0	0	-	0	0	0
Others.........	a/	a/	-	a/	0	202
Total........	920	274	467	920	5,158	2,344
	1,000 barrels	1,000 barrels	1,000 barrels	1,000 barrels	1,000 barrels	1,000 barrels
Flour						
United States..	79	10	299	200	853	1,416
Canada.........	9	1	1	57	49	25
Australia......	28	68	177	936	905	1,403
Japan..........	31	14	67	407	191	1,014
Others.........	1	11	1	14	49	17
Total........	148	104	545	1,614	2,047	3,875

Monthly returns of Foreign Trade of China and American consulate general at Shanghai. a/ Less than 500 bushels.

Japan

Most of the available wheat supplies from the 1940 crop of Japan are reported to have been absorbed by small millers, except for some quantities held by the prefectural authorities for local consumption. It thus appears that plans for further official purchases were made too late for the acquisition of any substantial quantities. Preliminary reports indicate that the condition of the 1941 crop is generally good, but yields are expected to fall below those of 1940 because fertilizer supplies were inadequate. The wheat crop of Chosen, however, may be above average, it is said, as a result of favorable weather.

Flour allotments in Tokyo have been reduced, although press reports have frequently stated that the acute shortage would be alleviated by large arrivals of foreign wheat. About a fourth of an early purchase from Australia of nearly 2 million bushels was delivered during March by Japanese ships. This wheat was originally intended, it is said, for flour to be exported to Manchuria and North China, but it probably will be used in Japan proper. A large wheat purchase from the Pacific West Coast was also reported by the press. It was stated that the authorities had appropriated a sum for Government food purchases involving at least 1 million bushels of wheat.

Because of low stocks, it is expected that official holdings of wheat will be seriously depleted during the next few months. Flour exports to yen-bloc countries seem likely to be reduced, and domestic rationing appears inevitable. No change in the official prices of wheat and flour were reported, and trade figures are no longer released.

Manchuria

In spite of drastic rationing and Government monopoly of wheat marketing and distribution, wheat supplies in Manchuria are too short to permit the desired exportation to Japan and other yen-bloc areas. This shortage, it is reported, is largely the result of subnormal deliveries by farmers and the disruption of normal imports. Comparatively heavy winter snowfall has made ample moisture available for spring seeding, but a reduced wheat acreage is expected by many unless the shortage of farm laborers and the dissatisfaction of the farmers with the monopoly control system can be relieved.

The Government monopoly is reported to have collected about half the 1940 crop from the farmers, but of the collections only about half have been turned over to the mills. With only 120,000 barrels of flour imported in March, which represented the quota due for shipment from Japan in February, a flour deficit of between 1.5 and 2 million barrels is anticipated for the marketing year ending July 1, 1941. The early plan of securing flour from Shanghai on a barter basis appears to have

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been abandoned, and no evidence has been noted of arrivals expected in March under the special allotment of foreign exchange by the Japanese Government for the purchase of Australian flour.

The accumulation of stocks is said to be out of the question, as demonstrated by the meagerness of the rations allowed the Chinese population in the larger cities, the extensive purchasing of wheat-flour substitutes, and the increasing adulteration of flour. Furthermore, substitute supplies are also reported to be scarce, and recent Japanese press reports indicate that Japan will be unable to export the wheat flour and rice needed in Manchuria and North China unless more Manchurian grain and soybeans can be secured to compensate for the shortage of food and fertilizers in Japan.

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CANADIAN GRAIN STOCKS HIGH ON MARCH 31 . . .

Canadian stocks of grains on March 31 were large and in the case of wheat were of record size, according to the Dominion Bureau of Statistics at Ottawa. About 596 million bushels of wheat were in storage positions and on farms in Canada, while 44 million bushels in the United States brought the total supply to about 640 million bushels as compared with 419 million, the revised figure for the corresponding date of 1940. Stocks on Canadian farms, which included seed supplies, were 51 million bushels larger than the comparable figure for last year of 106 million and established a new high mark for wheat on farms at this season.

CANADA: Total stocks of grain on March 31, 1937 to 1941

Grain	1937	1938	1939	1940	1941
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
Wheat:					
In Canada	115,212	83,560	200,976	396,774	595,531
In United States	14,051	1,110	1,828	22,288	44,041
Total	129,263	84,670	202,804	419,062	639,572
Rye	2,184	1,991	4,974	7,121	10,231
Oats	80,092	78,227	145,754	154,448	145,122
Barley	22,498	25,738	35,793	37,562	35,852
Flaxseed	888	527	367	999	1,552

Dominion Bureau of Statistics, Ottawa.

Preliminary estimates of wheat fed, or to be fed, to livestock and poultry during 1940-41 were placed at 53 million bushels, which indicates the highest feeding of this grain ever reported for Canada in a single

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season, and compares with about 37 million bushels in 1939-40. Carry-over supplies of wheat on next July 31 were expected earlier in the season to approximate about 575 million bushels. This would ordinarily have covered total requirements for domestic use and exportation during two marketing seasons plus a normal carry-over, but with increased exports during recent weeks and larger domestic utilization, the balance remaining at the end of the season may be somewhat less than anticipated.

Total rye stocks on March 31 amounted this year to 10 million bushels as compared with 7 million last year. Supplies of oats and barley were smaller than last year but about equal to those reported on March 31, 1939. Stocks of other food, feed, or seed crops, such as flaxseed, potatoes, hay, and clover, classified in Canadian statistics as field crops, were also larger than last year on March 31.

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TURKISH GRAIN PRODUCTION REVISED DOWNWARD . . .

Early estimates of Turkish grain production in 1940 were too optimistic, according to information received in the Office of Foreign Agricultural Relations, and, with the exception of that for corn, have all been reduced. The final figures indicate that the 1940 crops were all above average but in some cases fell below those of 1939. Corn alone appears to have turned out better than expected (see Foreign Crops and Markets, March 3, 1941).

TURKEY: Production of specified grain crops, 1934-1940

Year	Wheat	Rye	Barley	Oats	Corn
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
1934	99,712	9,589	76,810	10,939	19,255
1935	92,640	8,508	62,992	15,983	17,965
1936	141,583	17,673	98,915	14,817	26,956
1937	132,996	13,331	104,609	15,438	21,301
1938	156,720	17,791	110,272	18,149	23,096
Average	124,730	13,378	90,720	15,065	21,715
1939	154,475	16,118	105,392	20,530	28,109
1940	150,831	19,015	103,570	16,328	29,841

Bauque Centrale de la Republique de Turquie and American Embassy, Istanbul.

Although the wheat crop was not so large as expected, 150,831,000 bushels as against 154,475,000 in 1939, wholesale dealers expressed the view that it was sufficient to meet all domestic requirements and that some quantities would have been exported this season except for

Government restrictions. Rye production exceeded that of 1939 by about 3 million bushels but did not fulfill early expectations. The Government has encouraged the use of rye to supplement wheat in bread making, and production has recently increased, although it shows considerable fluctuations from year to year.

TURKEY: Exports of bread grain by principal countries of destination, 1939-1940

	Wheat		Rye	
	1939	1940	1939	1940
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
Greece	a/	1,470	-	-
Belgium	-	239	-	16
Cyprus	-	159	1	-
Italy	-	-	342	165
Spain	-	318	-	-
Switzerland	-	92	-	-
Palestine	-	30	-	162
Syria	150	1	-	-
Germany	710	-	-	-
Others	1	38	-	-
Total	861	2,347	343	343

American Embassy, Istanbul.
a/ Less than 500 bushels.

The 1940 barley crop gave promise of exceeding the large 1938 outturn but is now placed at 103,570,000 bushels, or slightly below the 1939 harvest. The most drastic percentage reduction, however, in the estimated grain production occurred in the case of oats; this crop, formerly placed at 25,215,000 bushels, is now reported at only 16,328,000 bushels. Commercial stocks are said to be practically nonexistent, since the military authorities took over all supplies remaining from previous years. No exports were reported in 1940, and only a small amount left the country in 1939. Corn was the only grain to give better returns than expected; the latest estimate of nearly 30 million bushels indicates the largest crop reported in recent years. Among the peasants, this crop replaces wheat to a considerable extent as an item of food and is also an important feed grain.

In line with its policy of conserving grain supplies under emergency conditions, the Government recently decreed that only one type of bread could be made in three of the largest cities of Turkey; namely, Istanbul, Ankara, and Izmir. This new bread has been on sale since late in February and is composed of 85 percent wheat and 15 percent rye flour. This law had the twofold object of stretching wheat supplies and reducing the price of bread, which is said to have increased by 25 percent in 2 months. If satisfactory, it is reported that the new bread will continue to be made unless all rye supplies are exhausted, which is not expected in the near future.

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TURKEY: Exports of feed grains, by principal countries of destination, 1939-1940

Country	Barley		Oats		Corn	
	1939	1940	1939	1940	1939	1940
	bushels	bushels	bushels	bushels	bushels	bushels
England	15	1,383	-	0	-	-
Belgium	28	418	2	0	-	-
Greece	-	207	-	0	a/	-
Yugoslavia	-	92	-	0	-	195
Netherlands	-	34	-	0	-	-
Germany	2,087	-	-	0	565	-
Italy	936	-	300	0	127	-
Switzerland	20	-	-	0	10	-
Syria	a/	-	42	0	a/	-
Others	-	-	-	0	91	-
Total	3,086	2,134	344	0	793	195

American Embassy, Istanbul.
a/ Less than 500 bushels.

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BRAZIL ENCOURAGES THE PRODUCTION OF MANIOC . . .

Manioc is one of the oldest and most widespread of Brazil's agricultural crops, but its potential importance in international trade is just being realized, according to the American consulate general at Sao Paulo. Some impetus toward increased domestic production has recently resulted from Government decrees that require the mixing of manioc flour with wheat flour, in order that Brazil's dependence on imports of the latter may be decreased. The greater part of the crop, however, is consumed by the people in the form of meal. In the United States, a product of the root, tapioca, is used in considerable quantities. Under this heading, imports include both crude and prepared tapioca, cassava, and flour.

The manioc plant, also known as cassava, is said to be indigenous to tropical America, probably Brazil. From its tuberous root, various food products are made, but some varieties are also used in unprocessed form for both human consumption and forage for animals. It was cultivated by the Indians prior to the coming of the Portuguese and is grown quite generally throughout the country. It is estimated that about one-seventh of the total agricultural area of Brazil is devoted to the crop, but it has been grown and eaten, or sold in the local markets, by the small farmers and has not been important as an export crop. The total domestic production during 1931-1935 averaged 5,526,000 short tons; a slight decline occurred in 1935 and 1936, but in 1938, 5,903,000 short tons were reported. About half the total crop was produced until recently in the southern States, particularly Rio Grande do Sul and São Paulo. Since 1935, when production in Rio Grande do Sul was greatly reduced, a marked expansion has occurred in the central part of the country and especially in Minas Geraes. During 1936-1938, this State led all others, producing an average of 833,000 short tons, and was followed by Pernambuco and Rio Grande do Sul in second and third place, respectively.

BRAZIL: Production of manioc root, by zone and State, 1936-1938

Zone and State	1936	1937	1938
	Short tons	Short tons	Short tons
North			
Acre	39,683	40,234	39,352
Amazonas	29,762	33,069	34,171
Pará	181,880	188,493	187,391
Maranhão	241,404	243,057	242,506
Piauhy	25,188	26,465	26,125
Total	517,917	531,318	529,545
Northeast			
Ceará	462,966	446,432	449,738
Rio Grande do Norte	42,990	42,879	42,990
Parahyba	257,938	197,863	276,677
Pernambuco	689,643	580,433	661,380
Alagôas	282,740	266,801	284,393
Total	1,736,277	1,534,408	1,715,178
East			
Sergipe	374,782	407,851	402,340
Bahia	330,690	396,828	385,805
Expirito Santo	109,128	115,742	115,190
Total	814,600	920,421	903,335
South			
Rio de Janeiro	143,409	203,485	229,168
São Paulo	239,750	462,966	418,874
Paraná	264,552	297,621	292,110
Santa Catharina	198,414	214,948	209,437
Rio Grande do Sul	562,173	566,362	604,060
Total	1,408,298	1,745,382	1,753,649
Central			
Matto Grosso	11,023	28,770	28,880
Goyaz	135,583	148,810	145,504
Minas Geraes	829,216	843,260	826,725
Total	975,822	1,020,840	1,001,109
Total Brazil	5,452,914	5,752,359	5,902,816

American consul general at São Paulo.

Manioc is usually grown from cuttings of the stem but can be cultivated from seed. Considerable moisture is needed at the time of planting and it is said to thrive best in a loose clay soil, rich in silicon. Planting in southern Brazil is usually done in the period of heaviest rainfall, from August to December; in the northern part of the country, it takes place from January to May. Manioc can be harvested after 7 or 8 months' growth, but if left in the ground the roots continue to increase in weight. The general practice is to gather the roots during the first year. Both bitter and sweet varieties are grown. Although the former must be treated to remove acidity, they are preferred for industrial purposes because they are easier to grow, give higher returns, and are more resistant to diseases and pests.

Manioc meal

Over half of the manioc grown in Brazil is utilized for making meal. It is produced in every State, but Pernambuco, in the northeastern zone, has led in this industry during recent years. The process generally employed for making manioc meal is very simple and requires little equipment. The roots are washed, cut in small pieces, and placed in a press, which extracts a large part of the water content. The roots are then ground, toasted, and sieved. Most farmers own the equipment needed for home production: a few cutting instruments, hand press, hand-operated grinder, and an oven, but more mechanized equipment is found in commercial establishments.

BRAZIL: Production of manioc meal, by zone, 1936-1938

Zone	1936		1937		1938	
	Quantity	Percentage of crop	Quantity	Percentage of crop	Quantity	Percentage of crop
	Short tons	Percent	Short tons	Percent	Short tons	Percent
North	103,584	60	106,482	60	105,226	60
Northeast ...	367,584	64	322,186	63	360,618	62
East	183,864	68	201,721	66	195,636	65
South	235,361	50	315,657	54	310,188	53
Central	75,527	23	80,573	23	78,605	23
Total	965,920	53	1,026,619	54	1,050,273	53

American consulate general, Sao Paulo. 3 tons of root considered the equivalent of 1 ton of meal.

Any great centralization of the meal industry is said to be prevented by the necessity for treating the roots within 24 to 48 hours after removal from the ground to prevent deterioration. Because of the distances in Brazil and the lack of transportation facilities, it is therefore more practical to process the roots in the neighborhood where grown. Moreover, a comparison of the costs involved as between a small producer and a factory in Sao Paulo indicates that production at home is only about half as expensive as in the city, where it costs more to deliver the roots and where running expenses are greater.

Manioc flour

To manufacture manioc flour suitable for mixing with wheat flour, more care and skill are required, since the product must be fine and white. Both the chemical composition of the raw material and the milling process are important. Larger plants are therefore more practical for making flour, and since dry roots can be used the raw material may be shipped greater distances. Mills were established only after mixing was decreed and are centered in Sao Paulo.

The development of the industry is said to be entirely dependent upon the amount of manioc flour required for mixing purposes. Before 1938 there was no demand for the flour and practically no production. It is estimated that the total annual output of the country is now about 96,000 metric tons (106,000 short tons), of which nearly three-fourths are made in the mills of Sao Paulo.

The first decree requiring the adulteration of wheat flour used in bread making was passed on November 30, 1937. This simply stated that all wheat flour made in Brazil or imported from abroad could be used for bread only when a maximum of 30 percent of starches or flours of domestic production had been added to it. No specification of the type of flour or starch was given.

The law of February 3, 1938, provided for the organization of an inspection service under the direction of the Ministry of Agriculture. This agency was directed to ascertain the amount of wheat being ground by all the mills of the country and was given power to prescribe the quotas to be used in the mixing of manioc, rice, or corn flour, in accordance with the production of wheat flour and the amount of adulterants available.

Exceptions were made in the case of mills using domestic wheat only and for the production of a limited amount of pure wheat flour for diet requirements. Whole-wheat flour could also be made without admixtures. By the decree of December 15, 1938, however, it was provided that domestic wheat should be distributed to all mills at a fixed price and that all should make the mixed product as prescribed by the inspection service. The percentages of adulterants were not required to be uniform throughout Brazil, but were based on the supply available in a particular community. It is doubtful if the domestic consumption of manioc flour can be increased beyond the total amount required for mixing, but this assures a market for a considerable part of the manioc crop, and for that reason, the Government is not likely to do away with mixing regulations.

Manioc starch or tapioca

Although hope is entertained that manioc in the form of starch or tapioca may attain some importance as an export crop, many difficulties appear to be in the way of such development. There are few factories in Brazil for making starch, and the process is more complicated than that employed for the other products.

As in the case of meal, starch is best extracted from the fresh undried root. Starch factories must therefore be near the sources of supply. Large quantities of clean, clear water are needed. The fresh roots are washed and then chopped or grated into small pieces. A stream of water is passed over the pieces, carrying them through a series of sieves. The fine particles that pass with the water into tanks must then be removed from the water by passing the liquid through a series of sedimentation tanks. Finally the starch is dried in slow ovens or in the sun. If desired, the wet starch is dried quickly by being dropped through a tube on a hot metallic plate. The heat causes the liquid to dissolve part of the starch, and the drops unite to form the characteristic semi-transparent grains known to the American consumer as tapioca.

Manioc exports

While the exportation of manioc has never been significant in the trade of Brazil, small quantities have been shipped from the country each year, mostly in the form of meal. Argentina has been the principal country of destination for exports of meal, but Uruguay, the United Kingdom, and Portugal have taken relatively sizable amounts in recent years.

BRAZIL: Exports of manioc products, 1936-1939

Year	Root	Meal	Flour	Starch	Tapioca	Total
	Short tons	Short tons	Short tons	Short tons	Short tons	Short tons
1936	401	10,728	1,017	2,423	808	15,377
1937	1	3,523	72	131	231	3,958
1938	2	5,525	-	25	61	5,613
1939	-	3,860	4	1,210	233	5,307

American consulate general at Sao Paulo.

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RICE PRODUCTION IN INDIA SHARPLY REDUCED . . .

The 1940-41 rice crop in India has been officially forecast at 1,633 million bushels as compared with the revised estimate of 1,928 million bushels for the preceding year, according to information received by the Office of Foreign Agricultural Relations. The harvest this season is the smallest in more than 20 years. The acreage was 3 percent below last year and production 15 percent below.

The short crop this season is primarily the result of unfavorable weather, which decreased the yield in several important producing areas. The greatest decrease has been in the Province of Bengal, which normally accounts for about 30 percent of the Indian production. Weather conditions in Bengal, for the most part, were unfavorable throughout the greater part of the growing season. In some districts there was a pronounced drought. In Bengal the acreage for 1940-41 was reduced more than a million acres. The high price of jute at the time the crop was planted induced a considerable increase in acreage for this fiber, and land which ordinarily would have been used for rice was sown to jute.

India, the world's second largest rice producer, has in recent years been the world's largest rice importer. During the past 5 years, rice imports have averaged over 3 billion pounds annually. More than 90 percent of the imported requirements are obtained from Burma, where this season a record crop was harvested, and the exportable surplus is placed at 7.6 billion pounds. The European war has shut off some of the regular outlets for Burman exports. The large exports made to Japan in 1940 reduced the Burman surplus so that the carry-over at the end of the year was relatively small. This year exports to Japan are expected to be substantially smaller. An increased volume of Burman rice will therefore be available for the Indian market.

INDIA: Rice acreage and production, 1940-41, with comparisons

Year	Acreage	Production
	Thousand acres	Million bushels
Average 1931-32 to 1935-36.......	70,555	1,938
1936-37........................	72,295	2,080
1937-38........................	72,568	1,996
1938-39........................	72,943	1,780
1939-40........................	74,255	1,928
1940-41........................	72,216	1,633

Compiled from official sources.

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IRELAND CROP ACREAGE AND PRODUCTION . . .

Ireland: Estimated acreage and production of specified crops, 1934-1940

Year	Wheat		Oats		Barley		Potatoes	
	Acreage	Production	Acreage	Production	Acreage	Production	Acreage	Production
	1,000 acres	1,000 bushels	1,000 acres	1,000 bushels	1,000 acres	1,000 bushels	1,000 acres	1,000 bushels
1934	94	3,803	583	39,262	143	6,779	343	94,999
1935	163	6,686	614	43,099	139	7,283	336	96,218
1936	255	7,839	559	36,188	130	5,707	334	90,387
1937	220	6,990	573	40,128	131	5,489	327	101,036
1938	230	7,398	570	39,133	118	5,142	327	91,872
Average	192	6,543	580	39,562	132	6,080	333	94,902
1939	255	9,520	537	37,774	74	3,453	317	111,925
1940	305	11,685	681	50,680	132	6,487	367	116,405

Compiled from official statistics.

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GRAIN STATISTICS . . .

WHEAT, INCLUDING FLOUR: Shipments from principal exporting countries, as given by current trade sources, 1938-39 to 1940-41

Country	Total shipments		Shipments 1941 week ended			Shipments July 1-April 19	
	1938-39	1939-40	Apr. 5	Apr. 12	Apr. 19	1939-40	1940-41
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
North America a/	245,296	209,872	6,010	6,661	8,541	167,392	152,712
Argentina	114,272	173,776	2,264	2,339	2,116	135,184	74,276
Australia	102,116	b/	-	-	-	-	-
Soviet Union	39,824	-	-	-	-	-	-
Danube & Bulgaria c/	52,848	39,616	-	-	-	-	-
British India a/	d/10,097	-	-	-	-	-	-
Total above	564,453	-	-	-	-	e/ 302,576	e/ 226,988
Total European a/	450,784	-	-	-	-	-	-
Total ex-European a/	146,760	-	-	-	-	-	-

Compiled from official and trade sources.
a/ Broomhall's Corn Trade News. b/ Not available. c/ Black Sea shipments only; no figures for current weeks. d/ Official. e/ North America and Argentina only.

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GRAINS: Weekly average closing price per bushel, future delivery, at leading markets, 1940-1941

Week ended	Wheat						Corn			
	Chicago		Winnipeg		Buenos Aires		Chicago		Buenos Aires	
	1940	1941	1940	1941	1940	1941	1940	1941	1940	1941 a/
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
High b/ ...	111	92	82	72	71	c/ 56	63	70	d/ 53	28
Low b/	97	80	77	69	e/ 58	c/ 55	56	61	d/ 35	26
			May							
Mar. 22....	104	88	81	71	62	55	56	64	36	28
29....	105	90	81	70	62	55	57	66	35	28
Apr. 5....	105	92	81	70	67	55	57	67	35	26
12....	107	91	82	70	70	55	59	67	36	26
19....	111	91	82	69	71	55	63	68	36	26

Corn prices at Buenos Aires compiled from New York Journal of Commerce; all other prices from Chicago Daily Trade Bulletin. a/ Official rate. b/ January 4, 1941, to April 19, 1941, and corresponding dates for 1940. c/ April and May futures. d/ February and May futures. e/ March and May futures.

FEED GRAINS: Movement from principal exporting countries, April 19, 1941

Commodity and country	Yearly exports		Shipments week ended a/			Exports so far reported		
	1938-39	1939-40	Apr. 5	Apr. 12	Apr. 19	July 1 to	1939-40 b/	1940-41 b/
BARLEY, EXPORTS: c/	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels		1,000 bushels	1,000 bushels
United States...	11,215	3,532	-	-	-	Feb. 28	3,308	464
Canada..........	16,537	13,338	-	-	-	Dec. 31	12,078	746
Argentina.......	9,356	18,628	-	-	-	Mar. 15	12,942	3,592
Danube & U.S.S.R.	26,005	4,297	0	0	0	Apr. 19	4,047	1,000
Total	63,113	39,795					32,375	5,802
OATS, EXPORTS: c/								
United States...	5,106	1,429	-	-	-	Feb. 28	930	584
Canada..........	13,738	24,330	-	-	-	Dec. 31	10,842	8,366
Argentina.......	19,379	27,624	62	351	7	Apr. 19	25,079	3,786
Danube & U.S.S.R.	30	250	0	0	0	Apr. 19	70	0
Total	38,253	53,633					36,921	12,736
CORN, EXPORTS: d/						Oct. 1 to		
United States...	34,369	44,284	-	-	-	Feb. 28	23,241	7,909
Danube & U.S.S.R.	19,629	5,304	0	0	0	Apr. 19	2,974	0
Argentina	142,869	87,766	275	20	8	Apr. 19	52,725	19,727
South Africa....	25,991	15,499	0	0	0	Apr. 19	11,491	0
Total	222,858	152,853					90,431	27,636
CORN, IMPORTS:								
United States	442	1,110				Feb. 28	240	844

Compiled from official and trade sources. a/ The weeks shown in these columns are nearest to the date shown. b/ Preliminary. c/ Year beginning July 1. d/ Year beginning October 1.

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VEGETABLE OILS AND OILSEEDS

MERICAN VEGETABLE-OIL CONSUMPTION INCREASES . . .

Visible annual supplies of vegetable oils in Mexico increased rapidly during the period of 1930 to 1939, according to a report received from Agricultural Attaché L. D. Mallory at Mexico City. The aggregate of cottonseed, copra, sesame-seed, peanut, linseed, and imported olive oils, and unspecified vegetable fats increased from 38,500 short tons in 1930 to about 96,000 tons in 1939. The chief source of vegetable oils and fats was copra, the largest part of which was imported as copra meat for crusing in Mexico.

The second largest item was cottonseed oil, followed by sesame in appreciable amounts, with minor quantities of peanut, linseed, and imported olive oil. In addition to these specific sources of supply, there were small amounts of castor oil, rapeseed oil, and an indeterminate quantity of palm oil. Undoubtedly there are also other small sources of vegetable oils of local importance.

It is apparent that the vegetable-oil industry is on the increase, not only with respect to domestic production of oilseeds, but also the extraction of oil from imported materials, such as copra. Consumption has risen rapidly; while all facts are not available as to the causes of change, it is not improbable that it is coupled with increased population, accelerated migration to urban centers, and the effect of the Mexican agrarian program on hog production.

MEXICO: Apparent annual supplies of vegetable oils, 1930-1939

Year	Cotton-seed	Coco-nut	Sesame	Peanut	Linseed	Olive oil a/	Others a/	Total
	Short tons	Short tons	Short tons	Short tons	Short tons	Short tons	Short tons	Short tons
1930.....	11,437	15,129	3,601	1,254	367	1,915	4,770	38,473
1931.....	14,659	19,393	9,700	1,314	1,076	1,068	808	48,018
1932.....	6,804	21,898	7,596	1,387	2,404	1,426	116	41,631
1933.....	17,119	29,108	5,837	1,429	1,057	341	203	55,094
1934.....	13,698	37,364	6,639	1,997	1,527	1,530	1	62,756
1935.....	10,744	35,358	8,544	2,223	1,073	1,690	35	59,667
1936.....	22,918	38,865	11,443	2,565	1,543	1,285	3	78,622
1937.....	25,993	50,650	12,304	3,136	2,035	1,421	22	95,561
1938.....	19,015	38,866	11,690	3,300	1,160	1,350	13	75,394
1939.....	15,486	57,622	15,214	4,130	1,662	1,533	10	95,657
Average	15,787	34,425	9,257	2,274	1,390	1,356	598	65,087

American consulate, Mexico City. a/ Imported.

More than half of the vegetable oils for consumption in Mexico during the past 10 years were supplied by copra. Sources of supply are from domestic production and imports. Up to 1934 domestic production was the more important but as use rose rapidly, production did not keep pace, and imports became the major item. Home production of copra during these years averaged between 18,600 and 24,000 short tons. Imports, which were only 4,400 short tons in 1930, reached 64,000 tons in 1939. With this increase, apparent supplies of oil have risen steadily, and in 1939 the 57,650 tons were approximately four times those of 1930.

Along the Gulf of Mexico, the cocoanut palm for copra production is found in Tabasco and Campeche, with a lesser quantity grown in the district of Quintana Roo. On the Pacific side, Guerrero is the chief producing State, with lesser amounts in Colima.

With the larger demand for vegetable fats and oils in Mexico, it might be expected that production would show a sharp increase. While figures are not available, it appears that there are considerable numbers of young palms, which will later increase the crop. Mexican production, however, is not expected to reach anything like its potentialities, as transportation facilities are poor and taxes are high. A sharp increase in world prices could possibly change the picture, but it does not appear probable in the immediate future.

Climatic conditions over considerable areas of coastal lands on both the Gulf of Mexico and the Pacific are suitable to cocoanut production. It appears that there are greater possibilities on the Pacific than on the Gulf of Mexico, for the reason that there are alternative crops that may be grown on the Gulf, and much of the soil in southern Veracruz and in the State of Tabasco is swampy and poorly drained Local taxes, however, are one of the principal impediments. In Tabasco the State Government claims $5.60 (United States equivalent) for each ton of copra produced; plus 15 percent for local charges; $1.86 per ton for the municipality; and 15 percent on the total for the Federal Government, totaling about $9.50 per ton. In addition there are unspecified taxes, such as licenses, stamps, etc., which bring the total to more than $11.00 per ton, and in some States taxes are much higher. While the Federal Government was increasing customs tariffs to promote the production of copra, each advance apparently permitted the State Governments to increase local taxes.

Monthly prices of cocoanut oil in Mexico City averaged 5.0 cents per pound during the 1938-39 marketing season (October-September), 6.5 in 1939-40, and 8.1 cents for the first 4 months of 1940-41.

The commercial palm-oil industry at present is small, but it has rather large possibilities. Indigenous to the country there are two palms bearing oilseeds, i.e., "Acrocomia Mexicana Karw" and "Orbignya cohune (Mart.) Dahlgren." The annual production of nuts is not known, nor is it known to what extent the natives utilize the oil for home consumption. It is known, however, that in the outlying regions oil is extracted from the nuts for home consumption.

MEXICO: Apparent annual supplies of coconut oil and palm oil, 1930-1939

Year	Copra			Coconut oil	Palm oil
	Production	Imports	Oil equivalent	Imports	Imports
	Short tons	Short tons	Short tons	Short tons	Short tons
1930........	19,601	4,414	15,129	0	0
1931........	19,501	6,776	16,554	2,686	152
1932........	19,492	9,443	18,330	3,189	480
1933........	20,261	19,533	25,071	2,391	1,647
1934........	22,258	35,105	36,139	866	358
1935........	23,385	31,276	34,436	252	670
1936........	19,798	39,603	37,418	465	982
1937........	18,263	a/58,778	48,327	1,046	1,276
1938........	20,354	40,289	37,510	13	1,343
1939........	23,961	64,288	55,597	22	2,003

American consulate, Mexico City. a/ 332 tons exported.

The two Mexican oil palms are apparently of less value commercially than those grown in other countries. The industry in the Malay States and Sumatra is apparently founded on the oil palm from French Guinea, the "Elaeis guineensis," while in Honduras the oil palm is "Orbignya cohune," or the cohune nut which grows somewhat larger than in Mexico. The cohune nut in Mexico yields a rather high percentage of oil, while that of the "Acrocomia" is less rich in oil content and is more difficult to crack. With the cost of labor in Mexico it has not been possible to put an extensive amount of hand work into cracking and extraction as a commercial enterprise. Some of this is done in outlying districts for local use and may be a significant source of vegetable oil in some districts. Over the past 30 years attempts have been made to find a machine that would extract the kernels from the palm nuts efficiently enough to permit setting up an extensive commercial industry. These attempts are still in progress. It appears possible that in the near future some development may take place in this field.

The census of 1930 gave the production of palm-oil nuts as 20,000 short tons; considering its widespread growth, often in unsettled or in inaccessible areas, this figure appears low. It is difficult to conjecture, how much oil may be supplied by palm nuts. No records of commercial crushings or the amount possibly harvested are available. As an approximate guess only, equivalents may amount to a few thousand tons.

Cottonseed production and imports buth increased during the past 10 years, and, apparently, are consumed within the country. While it is assumed that the greater portion of the oil produced from this seed is used for edible purposes, it is possible that a large percentage goes into soap manufacture, which has become more important in Mexico in recent years. In 1938 it was reported that the development of the vegetable-oil industry depended upon the growth of the soap industry.

MEXICO: Apparent supplies of cottonseed oil, 1930-1939

Year	Cottonseed		Cottonseed oil		Total supplies of oil
	Supplies for consumption	Oil equivalent	Imports	Exports	
	Short tons	Short tons	Short tons	Short tons	Short tons
1930.......	76,417	11,463	0	25	11,437
1931.......	94,736	14,211	449	0	14,659
1932.......	39,446	5,917	886	a/	6,803
1933.......	111,412	16,712	407	a/	17,119
1934	96,412	14,462	22	786	13,700
1935.......	105,398	15,885	72	5,213	10,744
1936.......	163,361	24,504	53	1,639	22,918
1937.......	155,858	23,379	2,615	0	25,993
1938.......	126,688	19,004	11	0	19,015
1939.......	103,191	15,478	8	a/	15,486

American consulate, Mexico City. a/ Less than 1 ton.

MEXICO: Production of cottonseed, sesame seed, flaxseed, and peanuts, 1930-1939

Year	Cottonseed	Sesame seed	Flaxseed	Peanuts
	Short tons	Short tons	Short tons	Short tons
1930.......	82,058	8,490	1,076	5,055
1931.......	96,911	16,613	1,918	5,186
1932.......	45,174	17,432	4,548	5,519
1933.......	116,310	13,846	1,976	6,796
1934.......	105,344	16,045	1,833	7,959
1935.......	119,952	20,822	1,928	8,896
1936.......	177,011	27,624	3,123	10,261
1937.......	164,032	29,626	3,778	12,200
1938.......	137,581	28,338	2,388	13,203
1939.......	111,025	36,592	4,279	16,523

American consulate, Mexico City.

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COTTON - OTHER FIBERS

SHANGHAI COTTON IMPORTERS EXPECT FURTHER SUPPLY DIFFICULTIES . . .

Forward purchases of raw cotton abroad by Shanghai importers were increased considerably during March in anticipation of a further reduction in shipping facilities, according to information received in the Office of Foreign Agricultural Relations. Stocks on hand at the end of March were reported to be sufficient for about 4 months at the present rate of consumption. Chinese mills at Shanghai have reduced operations to 85 percent of capacity because of difficult communications with the interior textile markets and the reduced power supply resulting from a fuel shortage. Mill operations in other parts of China showed little change from the preceding month. Total mill consumption of raw cotton in China, including Manchuria, was estimated at 122,000 bales for March.

Imports of raw cotton into China during the current season thus far have been maintained on the high level of last year. Imports of American cotton during the 5 months ended with February 1941, however, were only 9 percent of those for the corresponding period in 1939-40, while imports of Indian and Brazilian increased by 215 and 87 percent, respectively. The shift from American cotton is due largely to a wide price differential in favor of the other two growths.

CHINA: a/ Imports of raw cotton by countries of origin, and total exports, February 1941, with comparisons
(In bales of 478 pounds net)

Country	February			October-February		
	1939	1940	1941	1938-39	1939-40	1940-41
	Bales	Bales	Bales	Bales	Bales	Bales
Imports -						
United States........	13,506	62,038	5,354	20,475	170,830	15,733
British India........	13,537	11,263	58,708	59,014	61,474	193,776
Egypt................	2,066	6,612	425	13,116	17,996	4,667
Brazil...............	3,926	2,755	12,627	18,928	41,909	78,528
Others...............	1,010	86	1,066	1,736	1,708	4,858
Total.............	34,045	82,754	78,180	113,269	293,917	297,562
Exports	4,945	b/1,281	c/	138,236	b/ 10,073	bd/ 14,024

Compiled from Monthly Returns of the Foreign Trade of China.
a/ Excludes Manchuria.
b/ Exports for Japanese military account are not included.
c/ Not reported.
d/ October-January only.

Forward purchases at the end of March were estimated at 185,000 bales, including 90,000 bales of Indian cotton, 65,000 of Brazilian, and 20,000 of American. Unsold stocks at Shanghai amounted to 27,500 bales, 5,000 of which were American and 10,000 each of Indian and Chinese. Arrivals of domestic cotton at Shanghai improved slightly during March, although still remained at an abnormally low level. The outward movement of North China cotton from rural districts has been disappointing despite a recent increase in prices fixed by Japanese officials. Home spinning is still more profitable and it may be assumed that larger-than-usual quantities of raw cotton will be consumed in this way as long as cotton goods are difficult to obtain.

In order to permit the cotton mills of North China to maintain operations at 45 percent during November and December 1940, Japanese officials permitted the importation into North China of about 30,000 bales of cotton. The quota was raised to 60,000 for the first 3 months of 1941, but reduced to 17,000 and 11,000 bales, respectively, for the second and third quarters.

The price of American middling 7/8 inch at Shanghai on April 15 was equivalent to 15.02 cents per pound, representing an increase of about 1 cent above quotations on March 15, while prices of Indian Akola registered a smaller increase from 8.87 to 9.28 cents. Prices of American middling 15/16 inch rose from 14.15 to 15.14 cents, and Brazilian type 4 showed an equal increase from 12.17 to 13.15 cents. Yarn prices also increased, although demand was weak and stocks were larger than in previous months.

Both the Chinese and Japanese Governments are making efforts to increase cotton acreage in China for 1941. In occupied areas of North and Central China, Japanese officials plan to provide cotton growers with improved seed and to extend loans to them for buying foodstuffs and fertilizers and for digging wells for irrigation. Available funds, however, are considered too small to effect any notable increase in production this year.

The Chinese Government has formulated a 3-year cotton-production plan to encourage cotton growing in 6 of the unoccupied Provinces of southwestern China. The plan involves only the provision of technical instruction and limited quantities of improved seed for farmers through local agricultural agencies. The larger cotton acreage for all China last year was due partly to an early drought that caused some rice fields to be planted to cotton. Favorable weather conditions thus far this year and higher prices of all food crops are expected to cause a shift from cotton cultivation that will offset any gains made by the Chinese and Japanese Governments in their efforts to increase cotton acreage.

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PERU CONTINUES HEAVY COTTON SHIPMENTS TO JAPAN . . .

Peru's increased exports of raw cotton to Japan in recent months have almost offset the loss of markets elsewhere, according to information received in the Office of Foreign Agricultural Relations. In 1940, Japan accounted for 59,300 bales, or only 27 percent of the total exports, against 98,000 bales, or 45 percent, for the United Kingdom. During the 7-month period, July-January 1940-41, however, about 69,000 bales or 53 percent of total exports of 131,000 bales were destined for Japan, compared with only 26,000 bales out of 263,000 bales during the corresponding period in 1939-40. Preliminary figures for February and March indicate that shipments to Japan during those months represented about 50 percent of total exports. Other sources suggest that the 19,000 bales reported as exports to Mexico in February may also have been intended for transshipment to Japan.

PERU: Raw-cotton exports by countries of destination, January 1941, with comparisons
(In bales of 478 pounds net)

Country	1938	1939	1940	January 1940	January 1941
	Bales	Bales	Bales	Bales	Bales
United Kingdom	175,100	164,400	98,000	24,400	0
Germany	77,800	50,300	0	0	0
Japan	5,500	36,400	59,300	600	28,100
Netherlands	14,000	31,900	3,800	2,100	0
Italy	1,800	5,900	10,000	1,800	0
Chile	6,000	10,800	12,200	800	1,900
Colombia	0	0	7,500	0	2,100
United States	0	3,100	6,800	500	400
Venezuela	0	1,100	4,300	0	0
China	200	1,800	4,200	0	1,300
Others	25,200	34,600	13,900	3,100	300
Total	306,600	340,300	220,000	33,300	34,100

Compiled from Anuario del Comercio del Peru and Algodon, Boletin de la Cámara Algodonera del Peru.

A British commercial mission visiting Peru in January 1941 announced its plan to purchase about 40,000 bales of Peruvian cotton directly from producers. Since most of the 1940 crop had passed out of the hands of producers, only about two-thirds of the desired quantity had been obtained by the end of February.

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Up to February 14, 1941, sales of 287,900 bales of the estimated 1940-41 crop of 386,000 bales had been recorded by the Peruvian cotton exchange, and it is believed that an additional 40,000 to 60,000 bales had been sold. The cotton-picking season in Peru is spread throughout most of the year, with the heaviest part of the harvest coming between May and September.

Depreciation of the Peruvian currency had a restrictive influence on imports of cotton textiles in 1940 and enabled the domestic mills to gain a larger share of the local market. The production capacity of weaving mills was increased about 10 percent in 1940 through the addition of 700 new looms. Increased output and good local demand resulted in larger imports of cotton and rayon yarns. Consumption of raw cotton by Peruvian spinners in 1940 was estimated at 32,500 bales.

Cotton manufacturing has become one of the most important domestic industries in Peru and is consuming larger quantities of the domestic cotton crop. The large mills, which in past years turned out only rough sheetings, gingham, and coarse knit goods, are now producing a wide range of higher-grade materials. With the exception of the mercerized-gassed class, domestic plants produce almost the entire cotton-yarn requirements of local weaving mills, 60 percent of the country's demand for cotton piecegoods, and 95 percent of the demand for rayon fabrics.

Japan took the lead in 1940 formerly held by Great Britain as a source for Peruvian imports of cotton textiles, while extensive gains were made by the United States.

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BRITISH COTTON PRICES FIXED TO JULY 31 . . .

When on March 31 the Liverpool cotton market was closed, all cotton and cotton-yarn prices were frozen at the official maximum levels of that day. It was indicated that a more comprehensive fixation of prices was to follow, and, that, at any rate, the quotations of March 31 would remain in effect at least to the end of April.

The Cotton Control has now announced that raw-cotton prices at the official maximum quotations of March 31, 1941, will remain in force until July 31. The Control will endeavor to give at least 1 month's notice of any change in price. It is to be expected that cotton-yarn prices also will remain unchanged as long as raw-cotton prices do not undergo modification.

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TOBACCO

PHILIPPINE TOBACCO-GROWING CONDITIONS MORE FAVORABLE THAN MARKET OUTLOOK . . .

Limited information concerning the 1940 tobacco crop in the Philippine Islands indicates that growing conditions have been favorable and that transplanting was finished in the Cagayan and Isabela districts during January, according to a report from the American consulate in Manila. Estimates made by the Philippine Bureau of Census and Statistics for the 1940 crop place the harvest at approximately 75.9 million pounds from 177,912 acres. Both area and harvest for that year were above the average for 1935-1939 when 72.3 million pounds were produced from 170,912 acres. The quality of the 1940 crop was reported good in the important Cagayan and Isabela districts, but only fair in Leyte, Pangasinan, and La Union districts.

Prices paid to growers for the 1939 crop amounted to P5.39 per quintal (2.7 cents per pound). This is an average for all Provinces, based on farm weights for unpacked tobacco. Complete price information for the 1940 crop is not yet available, but in Cagayan and Isabela districts leaf was reported from 40 to 50 percent higher than in 1939. These reports, however, were based on sales during September and October when tobacco was abnormally high. Since that time, the price has dropped somewhat. One authority states that in 1939 leaf in these districts averaged about P9.00 per quintal (4.4 cents per pound); in 1940 it was well above P10.00 per quintal (4.9 cents per pound).

PHILIPPINE ISLANDS: Area and production of tobacco, 1926-1940

Year of harvest	Area	Production	Yield per acre
	Acres	Pounds	Pounds
Average 1926-1930..........	198,594	103,799,810	523
1931......................	183,218	95,953,794	522
1932......................	193,306	99,529,202	515
1933......................	184,361	92,043,000	499
1934......................	136,968	72,040,816	526
1935......................	152,016	63,145,196	415
1936......................	161,801	71,056,346	439
1937......................	182,953	73,543,982	402
1938......................	184,821	79,241,511	429
1939 a/	172,970	74,361,363	430
1940 a/	177,912	75,851,714	426

United States Bureau of Insular Affairs.
a/ From Bureau of Census and Statistics.

The outstanding feature of 1940 was the passage of a bill providing for the organization of a National Tobacco Corporation, the objectives of which are, broadly, to regulate the production, consumption, and marketing of tobacco in the Philippines; to improve living conditions of the growers; and to improve the quality of leaf grown. Under this act, some very extensive powers were granted to the Corporation. It may buy, sell, import, and export leaf tobacco to manufacturers; it may own, lease, and operate truck and railway lines, warehouses, machinery, and equipment; and it may extend credit facilities to the tobacco growers, and act as agent, broker, or commission merchant. As the Corporation was not organized until July 1940, insufficient time has elapsed to show whether it will attain its objectives.

Under amendment provisions of the Philippine Independence Act of August 7, 1939, shipments of cigars, scrap, and filler tobacco to the United States were made subject to duty-free quotas instead of the credited export taxes provided for in the previous act. These provisions covered entry into the United States beginning with the year 1940, and the quota for that year was 200 million cigars and 4.5 million pounds of scrap and filler tobacco. The quotas are subject to reductions of 5 percent during each subsequent year until 1946, after which time, full United States duties will be applied. The quotas for 1940 were considered generous, and have not proved to be a serious burden to the industry. The cigar quota was substantially in excess of actual shipments during any recent year and available reports indicate that the quota for the year was filled. The 1940 quota for scrap and filler tobacco was very much below actual shipments during 1939, although it compared favorably with exports during earlier years. Apparently shipments during 1939 were abnormally high, having been based upon anticipation of the quota.

The outlook for the Philippine tobacco industry during the coming year is not very favorable. Under the quota system, shipments to the United States will be limited to 190 million cigars and 4,275,000 pounds of scrap and filler. Both figures are substantially below actual shipments during either of the past 2 years, which, in connection with the unfavorable conditions prevailing in the European market, will affect the industry somewhat adversely.

The outlook for exports to other countries is far from favorable. Substantial quantities of cigars and scrap and filler tobacco hitherto shipped to various European countries will, undoubtedly, be curtailed this year owing to war conditions. It is doubtful whether Spain, the principal market, will be able to purchase in full volume. Japan also has been a fairly important buyer, and shipments to that area may be expected to decline. Other adverse influences include substantially higher transportation costs, a possible reduction in domestic consumption owing to lower purchasing power (contingent upon low prices of Philippine products), and possible increases in taxes. The Philippine Commonwealth

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is faced with the certainty of a substantial reduction in governmental revenue, and the tobacco industry will probably be called upon to help supply the deficit.

PHILIPPINE ISLANDS: Exports of leaf, filler, scrap, and cigars by principal countries, 1939 and 1940

Country of destination	Leaf, filler, and scrap a/		Cigars	
	1939	1940	1939	1940
	1,000 pounds	1,000 pounds	Thousands	Thousands
United States......	15,679	5,858	192,208	183,484
Spain..............	10,982	23,845	3,001	16,417
French Indochina...	383	549	-	-
French Africa......	1,270	519	-	-
China..............	534	788	2,745	2,799
Netherlands........	14,709	35	-	-
Japan..............	1,771	-	-	-
Belgium............	370	132	-	-
Hong Kong..........	98	91	581	526
Gibraltar..........	2,466	-	-	-
British Malaya.....	-	-	1,174	514
Other countries....	1,371	626	7,364	2,491
Total	49,633	32,443	207,073	206,231

Compiled from official sources. a/ Includes some smoking tobacco.

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ORIENT TOBACCO PRODUCTION AND CONSUMPTION INCREASED; IMPORTS MAINTAINED . . .

Early planting indications point to a near-record 1941 production of flue-cured tobacco in the oriental countries of China, Manchuria, and the Hapanese Empire, of about 285 million pounds, which compares with a revised 1940 production of 276 million and average production for the 5 years, 1934-1938, of 227 million pounds. The countries' consumption of cigarettes, in which most of the leaf is used, has returned to about the level that existed before the outbreak of hostilities in 1937, and substantial quantities of American leaf are still needed to supplement the domestic supply, according to American Agricultural Attaché Owen L. Dawson at Shanghai.

Flue-cured production in China continues below the high level attained before the outbreak of hostilities, but expansion in the Japanese Empire and Manchuria has been rapid. This, together with the control of Chinese production by Japanese interests, limits the outlet for American leaf in the Orient to supplies needed by British, American, and Chinese factories operating in China. These concerns, however, are losing much of the market to Japanese-controlled factories, and, if present trends continue, the outlet for American leaf will be substantially diminished within the next few seasons.

ORIENT: Estimated acreage, yield, production, and farm price of flue-cured tobacco in China, Manchuria, and the Japanese Empire, 5-year average 1934-1938, 1939, 1940 and forecast for 1941

Country and year	Acreage harvested	Yield per acre	Production	Farm price per pound	
				Local currency	United States currency
China	Acres	Pounds	pounds	Yuan	Cents
Average 1934-1938	146,260	1,059	154,900	.178	4.63
1939	110,000	1,091	120,000	.533	3.79
1940	117,000	1,047	122,500	-	-
1941 a/	113,000	1,060	120,000	-	-
Manchuria					
Average 1934-1938	6,180	1,077	6,657	.201	5.79
1939	35,000	1,114	39,000	.350	8.20
1940 b/	40,000	825	33,000	-	-
1941 a/	36,000	1,083	39,000	-	-
Japanese Empire c/				Yen	
Average 1934-1938	44,142	1,472	64,987	.368	10.46
1939	71,802	1,631	117,125	.529	12.40
1940 b/	85,200	1,411	120,249	-	-
1941 a/	86,728	1,454	126,100	-	-
Total					
Average 1934-1938	196,582	1,152	226,544	-	6.34
1939	216,802	1,274	276,125	-	8.07
1940 b/	242,200	1,139	275,749	-	-
1941 a/	235,728	1,206	285,100	-	-

Compiled from official and trade sources; American agricultural attaché, Shanghai.

a/ Forecast. b/ Preliminary. c/ Japan proper, Chosen, and Formosa.

China

Plantings of flue-cured tobacco for the 1941 crop in China are expected to be about equal to the 1940 area of 113,000 acres. With average yields, this area would produce approximately 120 million pounds as compared with the revised 1940 production of 122.5 million pounds, and the average production during the 5 years, 1934-1938, of 155 million pounds.

Marketing of the 1940 crop has been delayed as a result of Japanese restrictions against purchases by British, American, and Chinese manufacturers, and refusal of many producers to sell to the Japanese agencies at prices offered. According to early season plans, purchases by British and American buyers in the Shantung district were to be limited to 10 million pounds, and the allotment to Chinese manufacturing interests was set at 8 million pounds. The remaining 32 million pounds of the estimated 50-million-pound crop was retained for Japanese interests. The entire crop in the Anhwei district, of about 17.5 million pounds, and all of the Hanan crop, estimated at 55 million pounds, that could be brought to marketing centers was also retained for Japanese interests. Purchases by Japanese concerns have been far below the supply allotted to them, however, as the Chinese growers continue to resist Japanese pressure and refuse to sell to them at prices offered. Much of the leaf has been sold, or is being held for hand-rolled cigarette operators and small Chinese factories in free China.

Imports of American leaf and stems into China have continued relatively large despite shipping difficulties and further restriction in the output of cigarettes by British, American, and Chinese manufacturers who use the leaf. For the fiscal year ending September 1941, they are now expected to total about 65 million pounds as compared with approximately 80 million in 1939-40, and 71 million pounds in 1938-39. Imports from India, the other principal source of supply, are expected to be substantially below those of the 2 preceding fiscal years and total only about 5 million pounds.

Cigarette consumption, including that of hand-rolled cigarettes, during 1940-41 is expected to be slightly above that of the preceding year, and only about 10 percent below the high level of about 200 million pounds that prevailed before the outbreak of hostilities. Japanese interests continue to make inroads on the long-established British, American, and Chinese manufacturers. The output of Japanese factories has increased from less than 1 percent of all cigarettes produced in 1937-38 to approximately 30 percent of the total during recent months. In addition, Japanese agencies have established control over the marketing of a large share of their competitors' output, and much of the profit from such sales is retained by them.

Manchuria

Early reports indicate a 1941 area of flue-cured tobacco in Manchuria of about 36,000 acres, as compared with 40,000 in 1940. If average yields are obtained, the 1941 production from the area indicated would be about 39 million pounds, as compared with a recently revised estimate of only 33 million pounds from the larger 1940 area. Drought, disease damage, and cold weather resulted in low yields of inferior leaf in 1940, and are expected to check the rapid expansion in production that began in 1938.

The marketing of flue-cured leaf in Manchuria continues to be under the monopoly control of the Japanese-sponsored Manchurian Leaf Tobacco Company. This company also has control of all leaf imports, and the tobacco obtained, whether from domestic producers or by imports, is resold to manufacturers at prices materially above cost. As a result of exchange restriction, imports of American leaf into Manchuria have been eliminated and for the past 2 years have been largely from Japan. Imports from China, which was formerly the chief source of supply, have been sharply curtailed.

The consumption of cigarettes, which has increased substantially in recent years, is expected to show a slight decline for the fiscal year October-September 1940-41, as a result of a shortage in leaf supply. To facilitate the distribution of the short supply of cigarettes, a semi-Government control agency, in which all manufacturers will participate, is being established. The organization is to be known as the "Manchuria Tobacco Manufacturers Union" and will be under the control of the Manchurian Ministry of Agricultural Development. When established, the union will supervise the distribution of all cigarettes sold in the country. Supplies allotted to each locality will be in accordance with consumers' needs. Distribution will be through wholesale and retail unions, and individual establishments will be placed under license.

A revised schedule of taxes on cigarettes became effective on December 28, 1940. The new rate on cigarettes was fixed at 40 percent of the retail price and compares with the old rate of 33 percent.

Japanese Empire

Early reports of plans by Japanese Empire monopolies indicate that the area planted to flue-cured tobacco in Japan proper, Chosen, and Taiwan in 1941 will be about 87,000 acres as compared with 85,000 harvested in 1940, and an average acreage during the 5 years, 1934-1938, of only 44,000. Most of the increase is expected to occur in Chosen. Latest reports from Japan proper were that tobacco plantings would not be increased in order that a maximum quantity of rice could be produced. With normal yields, the forecast 1941 area for the Empire would produce about 126 million pounds, as compared with the latest estimate for the 1940 crop of 120 million, and the average production for the 5 years 1934-1938 of 65 million.

Imports of American leaf into the Empire have been banned since 1938, and the entire needs for manufacturing have been and are expected to continue to be supplied by domestic production and small imports from Japanese-occupied areas in China. Consumption of cigarettes, in which flue-cured leaf is used, has increased rapidly during the past 3 years. With imports barred and only limited possibilities for domestic leaf production, steps have been taken to curtail the expansion in consumption. In Japan proper various plans are reported to have been considered to curtail the use of tobacco, among which were a ban on smoking by young women and minors, and a ban on smoking in the street and offices. In Chosen it was reported that an economy of 20 percent in cigarette consumption might be enforced.

In addition to the leaf shortage, there are but limited supplies of material for cigarette making, particularly cigarette paper and packaging material. It is reported that in a number of Japanese towns, sales of cigarettes may be made only to those who return empty boxes. This procedure is expected to be extended to the entire country.

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AUSTRALIA PLANS TO DOUBLE TOBACCO HARVEST FOR 1941 . . .

Owing to dry weather that delayed planting of the 1940-41 tobacco crop in Australia, no data are yet available as to the quantity to be harvested this spring. If growers achieve their attempts to double the crop, however, prospects are good for a ready sale to domestic manufacturers, whose output and delivery are being rationed because of exchange difficulties, according to a report from the American consulate in Sydney.

Australian production of leaf tobacco (largely flue-cured) is at present less than one-fourth of normal consumption, and in order to conserve nonsterling exchange, imports of leaf tobacco from foreign countries have been reduced. This measure affects the United States most, as this country supplies approximately 98 percent of the Australian tobacco imports. Thus, conditions arising from the war have created definite opportunities for the expansion of tobacco production in Australia, provided the particular type of leaf favored by manufacturers, especially for cigarettes, can be produced in sufficiently large quantities. Although there has been some improvement recently in the general quality of Australian-grown tobacco, manufacturers consider that it is suitable only for blending with imported tobacco.

For many years the Australian consumer has demanded mild, light flue-cured tobacco; consequently, the manufacturer's demand is for similar types and qualities. A greater percentage of usable flue-cured leaf is produced in north Queensland and Western Australia than in other parts of the country, and these districts are said to offer the best prospects for expansion. Tobacco grown in Victoria is more satisfactory for smoking tobacco and fine-cut than for cigarettes. According to the evidence of manufacturers and others at a recent Tariff Board inquiry concerning the Australian tobacco industry, much of the soil used for tobacco production in Victoria, and the general climatic conditions of that State are not suitable for the production of flue-cured tobacco. The number of registered tobacco growers dropped from 415 in 1936 to 165 in 1939.

In July 1940 the Australian manufacturers generally agreed to purchase all the bright leaf (flue-cured) produced in the Commonwealth; and in Victoria and Western Australia to purchase twice as much leaf of smoking tobacco quality as that produced in 1940. Moreover, the largest manufacturer, as a war measure, is endeavoring to obtain 1 million pounds of air-cured leaf annually for 3 years.

Plans made by growers, manufacturers, and Government officials last July included the planting of an additional 7,500 acres in the present tobacco-growing districts, and a total 1941 production, forecast at about 9 million pounds. These plans, if realized in the current spring harvest, will almost double the crop of 1940 without extending cultivation to new areas. The Australian Tariff Board, on the other hand, doubted the feasibility of the expansion plan and stated in a recent report that suitable land, available in areas of favorable climatic conditions, was hardly sufficient to double the 1940 area. This opinion was reached, according to the Board, after a careful survey made of the growing districts by growers' representatives. Other drawbacks mentioned were the lack of experienced growers, and doubts as to the stability of present price levels.

AUSTRALIA: Area and production of tobacco, 1930-1935

Year of harvest	Area	Production	Year of harvest	Area	Production
	Acres	1,000 pounds		Acres	1,000 pounds
1930........	2,470	1,702	1936........	10,538	5,557
1931........	3,354	1,594	1937........	11,572	5,198
1932........	17,738	10,160	1938........	10,623	5,980
1933........	26,272	9,723	1939........	8,006	4,149
1934........	16,304	4,349	1940........	8,396	5,042
1935........	8,429	3,113	1941 a/	15,896	9,000

Compiled from official sources.
a/ Data represent only the plan of Australian growers, manufacturers, and Government officials, assembled in conference, July 1940.

A conference of Australian tobacco manufacturers and growers was held early in February to discuss plans for marketing the 1941 crop. It is reported that growers, anxious to change the present auction system, adopted an appraisement scheme based broadly on the wool-marketing system. The growers feel that the Australian tobacco auctions do not lead to satisfactory and equitable marketing, owing to the fact that one large company buys most of the crop, and sufficient competition is lacking.

Although the appraisement principle of marketing was accepted by both manufacturers and growers, the conference was broken up through their failure to agree on prices; and because of this disagreement the Australian Government may take control of marketing the crop.

Leaf tobacco sells for very high prices in Australia. The average price obtained at the 1940 Brisbane auctions was 27.38d. (36.8 cents) per pound. Top prices ranged from 44d. (59.2 cents) to 55d. (74 cents) per pound.

The entire Victorian crop was sold in three auctions at an average price for the season of 22d. (29.6 cents) per pound, or about 2d. (2.7 cents) per pound more than the 1939 price. At the Perth auctions, the average price was 24.14d. (32.5 cents) per pound.

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FRUITS, VEGETABLES, AND NUTS

PALESTINE CITRUS EXPORTS IN 1940-41 NEGLIGIBLE . . .

Shipments of citrus fruit from Palestine in the 1940-41 season to the end of January amounted to only 37,000 boxes, and no further exports were anticipated for the remainder of the season, according to information received by the Office of Foreign Agricultural Relations. Compared with pre-war levels, the volume shipped is insignificant. Lack of shipping facilities and the closing of the Mediterranean to commercial shipping are in the main responsible for the curtailment of exports. The condition of local citrus growers has been described as desperate, for they had already suffered serious losses in several seasons prior to the war due to the inability to market rapidly increasing crops during that period at profitable prices.

The extent and significance of the reduction in exports for the current season may be gauged by comparing the movement with the total of about 7,600,000 boxes shipped in 1939-40, the first year of the war, and more than 15,000,000 boxes exported in the 1938-39 season.

PALESTINE: Exports of citrus fruit, 1937-38 to 1940-41

Fruit	1937-38	1938-39	1939-40	1940-41 a/
	1,000 boxes	1,000 boxes	1,000 boxes	1,000 boxes
Oranges	9,573	13,055	6,450	b/
Grapefruit	1,791	2,067	987	b/
Lemons	77	142	154	b/
Total	11,441	15,264	7,591	37

Compiled from official sources.
a/ To January 31, 1941, only. b/ Not available separately.

It had been hoped at the beginning of the season that arrangements might be made to secure refrigerated vessels that could carry citrus via the Suez Canal and the Cape of Good Hope to the United Kingdom, Palestine's principal export outlet. During the negotiations, provision for sufficient space to carry about 2 million boxes of citrus had been contemplated, but, since the required tonnage was not available, these negotiations have now been abandoned.

It had been hoped also that part of the surplus could be shipped to Australia, New Zealand, and other eastern markets, using refrigerated space on vessels coming to Egyptian ports with Australasian frozen meats. This possibility likewise has proved disappointing since it was found that these markets were not in position to absorb important quantities of fruit at prices sufficient to cover the high cost of transportation.

PALESTINE: Exports of citrus fruit, by principal countries, 1938-39 to 1940-41

Country of destination	1938-39	1939-40	1940-41 a/
	1,000 boxes	1,000 boxes	1,000 boxes
United Kingdom	8,988	5,057	0
Netherlands	1,613	950	0
Belgium	1,132	497	0
Sweden	857	282	0
France	596	109	0
Poland	494	0	0
Norway	393	49	0
Rumania	311	184	0
Finland	149	1	0
Switzerland	123	129	0
Germany	115	0	0
Czechoslovakia	112	0	0
Other countries	427	338	37
Total	b/ 15,310	c/ 7,596	37

Compiled from official sources. a/ From October 1, 1940, to January 31, 1941, only. b/ Includes 46,000 boxes of citrus other than oranges, grapefruit, and lemons. c/ Includes 5,000 boxes of other citrus.

The serious plight of growers as a result of recurring losses over several seasons has been intensified by the present situation. In the spring of 1940, as a measure to assist growers in maintaining the groves, the Palestine Government arranged to guarantee bank loans under certain conditions up to a limit of £P500,000 ($2,000,000). Despite such assistance as has been received by many growers, groves have been abandoned on a considerable scale, with the result that the estimate of production of fruit suitable for export in the 1940-41 season has been reduced to only 8 million boxes. This is to be compared with the expectation, based on conditions existing prior to the war, that a total of between 18 and 19 million boxes of fruit would be available for export from Palestine in 1940-41. The official estimates of production for the season are as follows:

Oranges	7,200,000 boxes
Grapefruit	700,000 boxes
Lemons	100,000 boxes
Total	8,000,000 boxes

Citrus control board established

Effective October 17, 1940, a Citrus Control Board was established consisting of three official members and eight producer members. The purposes of the Board as described in the ordinance setting it up are:

(1) To provide for the control of the citrus industry up to and including export.

(2) To provide for the control of the area under citrus cultivation.
(3) To provide for control of handling and packing of citrus fruit.
(4) To provide for the inspection of citrus fruit intended for export.
(5) To provide the Board with full power of control over contracts for export shipments of citrus fruit from Palestine.
(6) To provide for the advertisement of citrus fruit in internal and foreign markets.

On December 17, 1940, this Board was duly established, but its work during the current season has been largely confined to the regulation of relief measures designed to maintain cultivation and otherwise conserve the groves until a substantial volume of exports will again be possible.

The authority of the Citrus Control Board does not extend to control over marketing. On December 17, however, by an Order of the High Commissioner, a Citrus Marketing Board was set up to take "such steps as may be deemed requisite to control the marketing of the citrus crop in the 1940-41 season." The Marketing Board issued an Order on January 16 that put into effect a marketing scheme designed to provide that a fair price be paid for such fruit as can be sold either in the local markets, in the manufacture of byproducts, or in export.

The scheme provides that a tax of 20 mils (8 cents) is to be paid for every 10 kilograms (22 pounds) of unpacked fruit and a tax of 120 mils (48 cents) for fruit packed in boxes. The tax is paid by either the producer or the purchaser before the fruit can be removed from the grove. A "disposal permit" indicating that the tax has been paid must be obtained before removing the fruit. Unpacked fruit to be used in the manufacture of byproducts or as cattle fodder is taxed at lower rates. The funds derived from these taxes are to be used to provide some form of financial assistance to growers "in a way best calculated to serve the interests of the industry as a whole." The total collected by these taxes during the first month of operation was only £P4,000 ($16,000), and revenue for the season is expected to be around £P20,000 ($80,000). The scheme has been criticized on the grounds that it has raised the price of fruit for consumption and yet will not result in the collection of sums large enough to be of any important assistance to the citrus industry.

It appears to be generally recognized that, in the light of the unfavorable situation and outlook at present and substantial indebtedness caused by earlier losses, many growers are no longer in a position to bear the costs of further cultivation of their groves unless additional Government assistance is granted. Certain trade interests have submitted proposals that the British Government purchase the Palestine citrus crop, as they have undertaken to buy the cotton crop in Egypt, date crop in Iraq, and carob crop in Cyprus. It is thought that there is little likelihood that the British Government will adopt the suggestion in view of

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the impossibility of using Palestine citrus fruit if purchased. The Palestine and British Governments, however, are considering the possibility of granting further assistance to the local citrus industry. In reply to a question in the House of Commons, the British Colonial Under Secretary, according to press accounts, indicated that comprehensive proposals to assist the industry had been received and were under urgent consideration.

Slight decrease in byproducts utilization

Although various proposals have been made to utilize a large part of the citrus crop in byproducts and other industrial outlets, expansion along these lines has been limited. Increases in the production of natural and concentrated juice have occurred, partly to supply British military forces in adjacent areas. Demand from this source is estimated to have used the equivalent of around 155,000 boxes of fresh fruit. Use of citrus fruit in the manufacture of alcohol, fertilizers, cattle fodder, and certain chemical products has yielded rather unfavorable results.

A delegation from Palestine attended the "Eastern Group" economic conference at New Delhi, India, in the latter part of 1940 and returned with reports concerning proposals to supply certain war requirements from Palestine. A War Supply Board was created by the Government to organize and regulate local production with a view to carrying out recommendations adopted at the conference. Certain citrus products, including citrus concentrates in tablet form (now in the experimental stage), are on the list of war materials.

The total utilization of citrus fruit in making byproducts is estimated at the equivalent of approximately 300,000 boxes of fresh fruit, which is appreciably less than the volume of fruit rejected for export. In the past, only such fruit has been used for byproducts. It seems unlikely that utilization in the processing industry in the near future can be sufficiently expanded to take care of any important share of the fruit that normally would be exported.

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ORANGE-PRODUCT FACTORY COMPLETED IN BRAZIL . . .

The completion of a factory for the manufacture of orange products at Taubate in the State of Sao Paulo, Brazil, was announced at a meeting of the Council of Economic Expansion of that State on February 4, according to a report from American Vice Consul John Hubner, 2d, at Sao Paulo. Concentrated juice of accepted commercial grades, cattle fodder, and a pulp to be used in the local manufacture of paper are among the products being contemplated. The plant, which has an annual capacity for some 500,000 boxes of oranges, is expected to commence operations this spring.

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SPANISH ORANGE CROP
FOR THIS SEASON
SET AT 22 MILLION BOXES . . .

Revised estimates now indicate that the Spanish orange crop for the 1940-41 season, November to May, was about 22 million boxes (of 70 pounds) compared with the revised estimate of 17,322,000 boxes for the previous season, according to information received in the Office of Foreign Agricultural Relations. About one-third of the 1940-41 crop was consumed within Spain, while the remainder has either been exported or earmarked for shipment to foreign outlets.

Germany has been the major market and is reported to have purchased about 8,500,000 boxes. In a recent agreement, the United Kingdom purchased about 1,250,000 boxes. France is credited with having placed orders for about 4,500,000 boxes, but only a small portion of this total is thought to have been shipped to France.

The 1940-41 orange crop had previously been estimated at over 24 million boxes but comparatively cold weather during the winter damaged the crop, with estimates running as high as 40 percent in some sections from partial freezing. Some of the damaged fruit, however, has been distributed and consumed within nearby sections at low prices.

Orange prices, in general, have been maintained at rather low levels, in spite of the exceptionally heavy demand for oranges due to shortages in many other foodstuffs. Prices have been such as to place the fruit within the reach of even the lower-income groups.

Of the total crop, about 55 percent was harvested in the Province of Valencia, 30 percent in Castellon, and 15 percent in Murcia. Estimated domestic consumption has been placed at about 8 million boxes of undamaged fruit and exports at probably around 11 million boxes; the remainder is accounted for by losses from freezing and other causes, although much of this volume was probably consumed within Spain.

Prior to the recent war in 1935-1939, Spain dominated the world orange-export picture, supplying in the 5 years, 1931-1935, for example, over 27 million boxes or about 62 percent of reported world exports. This volume was over six times more than shipments of the second ranking orange-exporting country. As a result of hostilities between 1935 and 1939, Spain's exports were very sharply curtailed, dropping to a volume roughly estimated at around 4 million boxes in 1939, the final year of hostilities.

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GENERAL AND MISCELLANEOUS

NORTHERN EUROPE DEVELOPING FEED FROM WOOD . . . . . .

Judging from reports received over a number of months in the Office of Foreign Agricultural Relations, wood as a source of livestock feed is gradually passing from an experimental stage into that of practical utilization in some European countries. It is interesting to note that in this development - the result of many years of research and experimental work - wood is the basic material not only for a new type of carbohydrate feed but also for protein feed. The former is the co-called feed cellulose produced from wood; the latter is feed yeast obtained from wood sugar and nitrogenous materials by biological processes.

Feed cellulose as a pure carbohydrate fodder is being produced on a fairly extensive scale in Sweden, Norway, and Finland. It is estimated that upward of 100,000 metric tons of feed cellulose will actually be fed in Norway during the current year and that the quantity produced and fed in Sweden will be even larger. In Finland the output of feed cellulose per day is estimated at 700 metric tons, which on an annual basis would be around 200,000 metric tons. Yet, in spite of this large output, the new feed is popular enough to have called forth a demand on the part of feeders that cannot be fully satisfied.

In view of the fact that this cellulose fodder - which in Sweden is being termed "wood oats" - is a pure carbohydrate feed, attempts have been made to mix it with protein substances, such as fish meal and soybean meal (if available) or with oats. Cellulose feed is said to have yielded good results in the case of cattle, horses, and sheep, but results in the case of hogs have been unsatisfactory.

In Germany, as well, feed cellulose has been given increasing attention in recent months. A company has been formed under the name of Berlin Cellulose Fodder Company for the purpose of financing the building of factories manufacturing cellulose feed. The company, whose shares are to a great extent in Government hands, will not itself produce, but will extend financial assistance for the construction of producing factories to work on behalf of the company.

Eight factories were scheduled to be built, one of which is said already to have started production. The cellulose feed to be produced is to be mixed with protein substances in order to make it a fodder of high feed value. Germany probably does not intend to use this new type of feed to the same relative extent as do the Scandinavian countries; yet, officially inspired comment seems to indicate that cellulose fodder is expected to make a significant contribution to the total feed supply. Since, however, Germany's main feed problem is a shortage of protein feed rather than a shortage of carbohydrates, the utilization of wood in the production of feed yeast seems to be a more important development.

The war appears to have given a considerable impetus to the development of Germany's new wood sugarization industry,. yielding high-grade yeast protein valuable as fodder. Indications are that production of feed yeast from a wood basis has expanded considerably since the outbreak of war and that further increases are likely, at least during such time as imports of protein feed remain greatly restricted.

Utilization of wood as a source of protein fodder for livestock constitutes one of the most important tasks assigned to German chemistry to assist in a realization of Germany's self-sufficiency aims. The German Government has in the past granted considerable subsidies for the development of scientific research in regard to wood sugarization. The idea of wood sugarization for producing protein fodder is based upon the hydrolytic conversion into sugar of the cellulose contained in the wood. Finally, the wood sugar and a nitrogenous material are converted by yeast to a protein fodder. Depending upon the wood sugarization process employed, 100 kilograms of dry-wood substance yield from 20 to 30 kilograms of dry yeast.

There are two principal wood-sugarization processes in use in Germany. One of these, the Scholler-Tornesch process, sugarizes ordinary wood by means of dilute sulfuric acid in stages of increased pressure and elevated temperature. The other process, the Bergius-Rheinau, proceeds from previously dried wood, which is sugarized by concentrated hydrochloric acid at normal pressure and normal temperature. By evaporation in a vacuum, hydrochloric acid and sugar are separated after decomposition, and the separated hydrochloric acid, upon being reconcentrated and separated from the acetic acid contained in the wood, is made available for re-use.

It is stated that the Scholler-Tornesch process offers an economic advantage in that it operates largely independently of the quality of the wood material and can process practically any mixture of sawdust, shavings, etc., without adversely affecting the output. This aspect is important, since sawdust and related waste material are amply available and much cheaper than fresh wood, with the added costs of preparing the fresh wood.

Aside from very large plants of the type of that operated by the Bergin and Suddeutsche Holzverzuckerungswerke companies, the national wood-sugarization plan contemplates the establishment of numbers of small sugarization plants in rural districts throughout the country, processing relatively small amounts of wood, or not more than 10,000 cubic meters annually, operated chiefly in conjunction with sawmills and related establishments producing wastewood as a byproduct. In this way, the German authorities hope to achieve a healthy decentralization of the industry and

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to provide an important use for the wastewood of local sawmills and wood-processing mills. Considerable numbers of these smaller plants are said already to have been established in various parts of Germany.

The Scandinavian countries have also reported plans for the production of yeast feed from wood. In Sweden a scientific institute is reported to be doing considerable research along these lines.

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FOREIGN EXCHANGE . . .

EXCHANGE RATES: Average value in New York of specified currencies, April 19, 1941, with comparisons a/

Country	Monetary unit	Year 1940	Month				Week ended		
			1939	1940	1941		1941		
			Mar.	Mar.	Feb.	Mar.	Apr.5	Apr.12	Apr.19
		Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Argentina...	Paper peso	29.77	31.23	29.77	29.77	29.77	29.77	29.77	29.77
Australia b/	Pound.....	305.16	373.27	299.50	321.11	321.30	321.13	321.08	319.80
Canada b/...	Dollar....	85,14	99.58	82.88	83.69	84.98	86.59	87.07	87.99
China.......	Shang yuan	6.00	16.02	6.41	5.42	5.36	5.23	5.26	5.21
England b/..	Pound.....	383.00	468.54	375.91	402.97	403.19	403.54	402.94	401.40
Germany.....	Reichsmark	40.02	40.10	40.11	39.97	39.96	39.95	39.96	39.96
Italy.......	Lira......	5.04	5.26	5.05	5.04	5.05	5.05	5.05	5.05
Japan.......	Yen.......	23.44	27.30	23.44	23.44	23.44	23.44	23.44	23.44
Mexico......	Peso......	18.55	20.03	16.65	20.52	20.53	20.53	20.53	20.55
Sweden......	Krona.....	23.80	24.13	23.82	23.83	23.82	23.83	23.82	23.83
Switzerland.	Franc.....	22.68	22.61	22.42	23.22	23.21	23.21	23.21	23.20

Federal Reserve Board. a/ Noon buying rates for cable transfers. Denmark, France, the Netherlands, and Norway have been omitted, as rates are not at present available. The last average monthly quotations in 1940 were as follows: Denmark, March, 19.31 cents; France, June, 2.01 cents; the Netherlands, April, 53.08 cents; and Norway, April, 22.71 cents. b/ In addition to the free rate there is also a fixed official buying rate: Australia, 322.80; Canada, 90.91; and England, 403.50 cents.

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